REMARKS

In view of the following remarks, reconsideration of the rejections and further consideration are requested.

Pending claims 1-7 have been rejected, claims 1-5 are amended herein, and claims 6 and 7 are canceled herein. Claims 8-12 are newly added herein. No new matter has been added.

The specification and abstract have been carefully reviewed and revised to make grammatical and idiomatic improvements. A substitute specification and abstract including the revisions have been prepared and are submitted herewith. No new matter has been added. Also submitted herewith are marked-up copies of the substitute specification and abstract indicating the changes incorporated therein.

The Abstract has been objected to because it is too long. The Abstract has been amended to include less than 150 words.

Accordingly, the Applicants respectfully request withdrawal of the objection to the Abstract.

The Examiner rejected claim 7 under 35 U.S.C. § 101 as being directed to unpatentable subject matter because it recites a computer program for causing an apparatus that has a CPU to control transfer of data. Moreover, the Examiner asserted that claim 7 fails to assert the program recorded on an appropriate computer-readable medium so as to be structurally and functionally interrelated to the medium and permit the function of the descriptive material to be realized. Claim 7 has been canceled herein, thus rendering the 35 U.S.C. § 101 rejection moot.

Accordingly, the Applicants respectfully request withdrawal of the 35 U.S.C. § 101 rejection of claim 7. New claim 12 has been drafted to recite a computer program recorded on a computer-readable recording medium. It is submitted that claim 12 recites patent eligible subject matter under 35 U.S.C. § 101.

Claims 1-7 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner asserted that the phrase "processing being for" as recited in claims 1, 6 and 7 is not definite and is confusing.

Claim 1 has been amended to remove "processing being for." Moreover, claims 6 and 7 have been canceled, thus rendering the 35 U.S.C. § 112 rejection of claims 6 and 7 moot.

Accordingly, the Applicants respectfully request withdrawal of the 35 U.S.C. § 112, second paragraph, rejection of claims 1, 6 and 7.

Claims 1-7 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Taniai et al. (U.S. Patent No. 5,438,665) (hereinafter referred to as "Taniai").

The above-mentioned rejections are not applicable to amended claim 1 for the following reasons.

Claim 1 recites a recording device control apparatus including, in part, a queue management unit operable to manage a processing order of received transfer requests, a transfer criterion judgment unit operable to determine which of the transfer requests to set as a focus request based on a predetermined transfer criterion, and a management information judgment unit operable to judge whether or not the focus request is a transfer request for management information, and on judging that the focus request is a transfer request for management information, judge with reference to the processing order whether or not a transfer request for management information exists before the focus request. Moreover, the apparatus of claim 1 includes a transfer request specification unit operable to judge with reference to the processing order whether or not a transfer request having type information identical to the type information of the focus request exists before the focus request when the management information judgment unit judges that no transfer request for management information exists before the focus request, and is operable to specify data relating to the focus request as a transfer target when no transfer request having type information identical to the type information of the focus request exists before the focus request.

Taniai discloses a direct memory access controller in which transfer control information necessary for the next transfer request is generated beforehand, and is immediately output after the request of the above next direct memory access (DMA) transfer request occurs.

Specifically, Taniai discloses a data processing system that includes a central processing unit 10, a direct memory access controller (DMAC) 11, two input/output ports 12, 13, a memory

14 such as a random access memory and a system bus 15 which includes an address bus, a data bus and a control bus. At a time of channel switching, a transfer control circuit 22 (included in DMAC 11) is informed of the channel for which a transfer request occurs, under the control of a transfer management unit 29. Then, the transfer management circuit 29 reads out the corresponding transfer control information from a temporary register 24, and outputs the same to the system bus 15. On the other hand, a control circuit 28 (included in transfer control circuit 22) generates control information necessary for a next data transfer, and writes the same into a transfer control information register 25 and the temporary register 24.

An arithmetic and logic unit ALU 27 (also included in the transfer control circuit 22) starts generating the address value and the byte count relating to the requested channel for the next data transfer under the control of the circuit control 28. Then the generated information is registered, through the internal bus, in the area of the temporary register 24 relating to the channel. At the same time, the address value and the byte count in the transfer control information register 25 relating to the requested channel are replaced with the generated address value and byte count. In this manner, the transfer control information necessary for processing the next transfer request is registered in the temporary register 24, and is immediately output to the system bus 15 when the next transfer request occurs.

In contrast to the present invention, Taniai does not disclose the transfer control circuit 22 including a transfer criterion judgment unit, a management information judgment unit and a transfer request specification unit. Instead, Taniai discloses executing transfer requests only in the order that they are received. Moreover, Taniai discloses a transfer control circuit 22, a temporary register 24, a transfer control information register 25, and a transfer management circuit 29 that transfer control information necessary for processing a next transfer request registered in the temporary register 24, and immediately output to the system bus 15 when the next transfer request occurs. Furthermore, there is no suggestion or disclosure to modify the system of Taniai to include a transfer criterion judgment unit, a management information judgment unit and a transfer request specification unit. In other words, Taniai does not disclose

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. . . .a queue management unit operable to manage a processing order of the received transfer requests; a transfer criterion judgment unit operable to determine which of the transfer requests to set as a focus request based on a predetermined transfer criterion; a management information judgment unit operable to judge whether or not the focus request is a transfer request for management information, and on judging that the focus request is a transfer request for management information, judge with reference to the processing order whether or not a transfer request for management information exists before the focus request; and a transfer request specification unit operable to judge with reference to the processing order whether or not a transfer request whose type information is identical to the type information of the focus request exists before the focus request when the management information judgment unit judges that no transfer request for management information exists before the focus request, and specify data relating to the focus request as a transfer target on judging that no transfer request whose type information is identical to the type information of the focus request exists before the focus request, as recited in claim 1.

Regarding claims 11 and 12, it is submitted that they are patentable over Taniai for reasons similar to those set forth above in support of claim 1. That is, claims 11 and 12 each similarly recite, in part, receiving transfer requests, managing a processing order of the received transfer requests, determining which of the received transfer requests to set as a focus request based on a predetermined transfer criterion, and judging whether or not the focus request is a transfer request for management information, and when the focus request is a transfer request for management information, judging with reference to the processing order whether or not a transfer request for management information exists before the focus request. Moreover, claims 11 and 12 include judging with reference to the processing order whether or not a transfer request having

type information identical to the type information of the focus request exists before the focus request when it is judged that no transfer request for management information exists before the focus request, and specifying data relating to the focus request as a transfer target when no transfer request having type information identical to the type information of the focus request exists before the focus request, and transferring the specified data.

For the above reasons, it is believed clear that claims 1, 11 and 12 are not anticipated by the reference cited by the Examiner. Furthermore, it is submitted that there is no teaching or suggestion in the prior art of record that would have caused an ordinary artisan to modify the prior art of record in such a manner as to result in, or otherwise render obvious, the invention of claims 1, 11 and 12. Therefore, it is submitted that claims 1, 11 and 12 are clearly allowable over the prior art of record.

Because of the above-mentioned distinctions, it is believed clear that claim 1, and claims 2-5 and 8-10 depending therefrom, and claims 11 and 12 are patentable over the reference relied upon in the rejections. Therefore, it is submitted that claims 1-5 and 8-12 are clearly allowable over the prior art of record.

In view of the foregoing amendments and remarks, all of the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action are respectfully solicited.

Should the Examiner believe that there are any remaining issues that must be resolved before this application can be passed to issue, it is respectively requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

Shohji OHTSUBO et al.

By: _Kevin McDermott_
Kevin McDermott
Registration No. 48,113
Attorney for Applicants

KM/JRF/lq
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
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